AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A purified polynucleotide encoding a neuralized (Neu) polypeptide, wherein said Neu polypeptide comprises at least one neuralized homology repeat domain and a C3HC4 RING-zinc finger domain, and wherein said polynucleotide has at least 85% ~~homology~~ sequence identity to a sequence selected from the group consisting of SEQ ID NO: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31 and 33.

2. (Withdrawn) The purified polynucleotide of claim 1, wherein the neuralized homology repeat domain comprises SEQ ID NO: 48.

3. (Cancelled)

4. (currently amended) The purified polynucleotide of claim 1, wherein said polynucleotide has at least 90% ~~homology~~ sequence identity to a sequence selected from the group consisting of SEQ ID NO: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31 and 33.

5. (currently amended) The purified polynucleotide of claim 1, wherein said polynucleotide has at least 95% ~~homology~~ sequence identity to a sequence selected from the group consisting of SEQ ID NO: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31 and 33.

6. (previously presented) The purified polynucleotide of claim 1, wherein said polynucleotide comprises a sequence selected from the group consisting of SEQ ID NO: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31 and 33.

7. (cancelled)

8. (cancelled)

9. (cancelled)

10. (cancelled)

11. (Withdrawn) A purified Neu polypeptide, wherein said Neu polypeptide comprises at least one neuralized homology repeat domain and a C3HC4 RING-zinc finger domain.

12. (Withdrawn) The purified Neu polypeptide of claim 11, wherein the neuralized homology repeat domain comprises SEQ ID NO: 48.

13. (Withdrawn) The purified Neu polypeptide of claim 11, wherein the polypeptide comprises an amino acid sequence with at least 80% sequence homology to an amino of acid sequence selected from the group consisting of SEQ ID NO: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32 and 34.

14. (Withdrawn) The purified Neu polypeptide of claim 11, wherein the polypeptide comprises an amino acid sequence with at least 85% homology to an amino of acid sequence selected from the group consisting of SEQ ID NO: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32 and 34.

15. (Withdrawn) The purified Neu polypeptide of claim 11, wherein the polypeptide comprises an amino acid sequence with at least 90% homology to an amino of acid sequence selected from the group consisting of SEQ ID NO: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32 and 34.

16. (Withdrawn) The purified Neu polypeptide of claim 11, wherein the polypeptide comprises an amino acid sequence with at least 95% homology to an amino of acid sequence selected from the group consisting of SEQ ID NO: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32 and 34.

17. (Withdrawn) The purified Neu polypeptide of claim 11, wherein the polypeptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32 and 34.

18. (Withdrawn) An antibody capable of specifically binding to a Neu polypeptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32 and 34.

19. (Withdrawn) The antibody of claim 18, wherein said antibody specifically binds to a polypeptide comprising at least 10 consecutive amino acids of said protein.

20. (Withdrawn) The antibody of claim 18, wherein the antibody is a monoclonal antibody.

21. (Original) An expression vector comprising a polynucleotide according to claim 1.

22. (Original) The expression vector of claim 21, wherein the vector is a plasmid.

23. (Original) A host cell containing the expression vector of claim 21.

24. (currently amended) A method of making a Neu protein, comprising: obtaining a polynucleotide comprising a nucleotide sequence encoding a Neu protein, inserting said polynucleotide into an expression vector such that said nucleotide sequence is operably linked to a promoter, and introducing said expression vector into a host cell, wherein said nucleotide sequence [[is]] has at least 85% ~~homologous~~ sequence identity to a nucleotide sequence selected from the group consisting of SEQ ID NO: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31 and 33, and whereby said host cell produces said Neu protein encoded by said nucleotide sequence.

25. (previously presented) The method of claim 24, wherein said nucleotide sequence is selected from the group consisting of SEQ ID NO: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31 and 33.

26. (previously presented) The method of claim 24, further comprising isolating said Neu protein.

27. (currently amended) A vector comprising a nucleotide sequence, wherein said nucleotide sequence encodes a Neu polypeptide, wherein said nucleotide sequence is operably associated with a promoter, and wherein said nucleotide sequence [[is]] has at least 85% ~~homologous~~ sequence identity to a nucleotide sequence selected from the group consisting of SEQ ID NO: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31 and 33.

28. (previously presented) The vector of claim 27, wherein said nucleotide sequence is selected from the group consisting of SEQ ID NO: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31 and 33.

29. (currently amended) A method of constructing a transformed host cell that expresses a Neu protein, comprising: providing a polynucleotide that comprises a nucleotide sequence encoding a Neu protein, and transforming said host cell with said polynucleotide, wherein said polynucleotide is capable of expressing said encoded Neu protein in said transformed host cell, and wherein said nucleotide sequence [[is]] has at least 85% ~~homologous~~ sequence identity to a nucleotide sequence selected from the group consisting of SEQ ID NO: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31 and 33,

30. (Withdrawn) A method of identifying a binding partner that interacts with a Neu family protein comprising: providing a support comprising a Neu protein or a functional fragment thereof; contacting the support with a candidate binding partner; and detecting a biological complex comprising the Neu protein and the candidate binding partner, wherein detection of such complex indicates that said candidate binding partner interacts with the Neu protein.

31. (currently amended) A purified polynucleotide encoding a Neu polypeptide, wherein said Neu polypeptide comprises at least one neuralized homology repeat domain and a C3HC4 RING-zinc finger domain, and wherein said Neu polypeptide has at least about 85% ~~homology~~ sequence identity to an amino acid sequence selected from the group consisting of ~~SEQ ID NO:~~ SEQ ID NOs: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, and 34.

32. (previously presented) The purified polynucleotide of claim 31, wherein said Neu polypeptide has an amino acid sequence selected from the group consisting of ~~SEQ ID NO:~~ SEQ ID NOs: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, and 34.

33. (previously presented) The method of claim 29, wherein said nucleotide sequence is selected from the group consisting of ~~SEQ ID NO:~~ SEQ ID NOs: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31 and 33.

34. (new) The purified polynucleotide according to claim 1, wherein said polynucleotide comprises a nucleotide sequence selected from the group consisting of SEQ ID NO:21, SEQ ID NO:23, SEQ ID NO:25, and SEQ ID NO:27.

35. (new) The purified polynucleotide according to claim 31, wherein said Neu polypeptide has an amino acid sequence selected from the group consisting of SEQ ID NO:22, SEQ ID NO:24, SEQ ID NO:26, and SEQ ID NO:28.